

BOTANY.—*Notes on Brazilian phanerogams.* LYMAN B. SMITH, Department of Botany, U. S. National Museum.

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The following miscellany is the result of studies toward the identification of various collections of Brazilian phanerogams. In some instances I have had the advice of specialists as noted below. Dr. John D. Dwyer of St. Louis University has kindly consented to publish his new species of *Luxemburgia* here in order to facilitate early use of the name.

Family POLYGONACEAE

Coccoloba rubra L. B. Smith, sp. nov.

FIGS. 1-4

Imperfecte solum cognita sed verisimiliter arbor parva; ramulis 3-4 mm diametro, glabris, leviter striatis, lenticellis ellipticis; ochreis oblique truncatis, 10 mm longis, paulo divergentibus, basi herbaceis, apice tenuioribus; petiolis supra canaliculatis, ad 2 cm longis, glabris, ad $\frac{1}{3}$ altitudinis ochreae insertis; foliorum laminis obovatis, emarginatis, basi rotundatis vel subtruncatis, 16 cm longis, 12 cm latis, tenuiter coriaceis, plus minusve bullata, supra glabra, subtus ad nervos puberulis, nervulis utrinque prominulis, inflorescentia terminale in ramulis lateralibus brevibus, racemosa, solitaria, laxiflora, 20 cm longa, pedunculo ca. 1 cm longo, rhachi 2 mm diametro, sulcata, glabra, nodulis 1-floris sed saepe aggregatis; bracteis late ellipticis, quam pedicellis subduplo brevioribus, membranaceis; ochreolis bracteas simulantibus sed latioribus; pedicellis gracilibus, 3.5 mm longis; floribus 4 mm longis; tubo perianthii late obovato, 1.5 mm longo, lobis late ellipticis, obtusis; staminibus forsan juvenilibus profunde inclusis; ovario ovoideo, stylis 3, brevibus; fructu ignoto.

Type in the U. S. National Herbarium, no. 2120041, collected in Mata do Hoffmann (Hoffmann's woods), Brusque, Santa Catarina, Brazil, November 21, 1951, by Roberto Klein (Instituto de Malariologia no. 33).

In Lindau's "Monographia generis *Coccolobae*" (Bot. Jahrb. 13: 106-229. 1891), this species would fall next to *C. schwackeana* in the key. However, unlike that species, its large leaves are emarginate at the apex and merely rounded or truncate at the base. Also the inflorescence is about twice as long as that of *C. schwackeana*.

Family CONNARACEAE

Connarus rostratus (Vell.) L. B. Smith, comb. nov.

Canicidia rostrata Vell. Fl. Flum. 184. 1825; Icon. 4: pl. 139. 1835.

Connarus marginatus Planch. Linnaea 23: 429. 1850.

Connarus cymosus Planch. op. cit. 430.

Connarus beyrichii Planch. loc. cit.

Neotype in the U. S. National Herbarium, no. 282298, collected by F. Sellow in Brazil without further locality.

The above type has been selected because, of the material available, it most nearly resembles the illustration in Vellozo's Icones, both in the form of the leaflets and in the much branched inflorescence.

In view of the variation in a single collection, Planchon's species do not appear to be more than forms.

Family MALPIGHIACEAE

Heteropteris ocellata L. B. Smith, sp. nov.

FIGS. 5-9

Frutex erectus; ramulis teretibus, gracilibus, novellis ferrugineo-velutinis, mox glabratibus, griseis, lenticellis minimis notatis, internodiis 3-6 cm longis; foliis oppositis, petiolis ad 5 mm longis, basi biglandulosis, laminis late ellipticis vel elliptico-obovatis, acutis cuspidatisque, basi rotundatis, ad 14.5 cm longis, 7.5 cm latis, subcoriaceis, margine integerrimis, supra sparse albido-pilosis, subtus ferrugineo-velutinis et basi glandulosis, utrinque glabratibus, biglandulosis; inflorescentiis axillaribus vel in ramulis 4-foliatis terminalibus, anguste pyramidatis, 14 cm longis, 6 cm diametro, ferrugineo-velutinis, umbellis 3-floris sed saepe aggregatis, bracteis ovatis, 3 mm longis, glandulis 2 orbicularibus ocellatis; pedunculis floriferis gracilibus, ad 5 mm longis; bracteolis parvis, ellipticis, eglandulosis; pedicellis gracilibus, ad 8 mm longis; sepalis erectis vel leviter incurvatis, ovatis, obtusis, 3.5 mm longis, glandulis calycinis 8 (sepalo unico nudo), oblongis; petalis luteis, ad 8 mm longis, margine subintegris; staminibus paulo inaequalibus, glaberrimis; stylis gracilibus, dorso apicis plus minusve angulatis; samaris late obliquo-obovatis, 25-30 mm longis, brunneo-alutaceis, puberulis,

margine superiore basi in appendiculam parvam producto, nuce obscura, obtuso-conoidea, crasse nervata sed sine alulis, areola applicatoria fere total faciem ventralem orbicularem occupante.

Type in the U. S. National Herbarium, no. 1997224, collected in campo, Município Ituiutaba, Minas Gerais, Brazil, June 29, 1950, by Amaro Macedo (no. 2445).

This species appears to be related to *Heteropteris catingarum* Juss. and *H. leschenaultiana* Juss. Unlike the former it has its pedicels articulated at the ends of slender peduncles, and differs from the latter in the dense subpersistent indument and two basal glands on the underside of the leaves and the elongate inflorescences.

Banisteriopsis macedoana L. B. Smith, sp. nov.
FIGS. 10-12

Frutex erectus; ramis teretibus, gracillimis, glabris, rubiginosis sublucidisque, internodiis ca. 15 mm longis; foliis oppositis, graciliter ad 5 mm petiolatis, lineari-lanceolatis, cuneatis, longe acuminatis, 45 mm longis, 5 mm latis, margine integerrimis supra fuscentiis, glabris, ex sicco lineato-rugosis, subtus viridibus, primo pube sparse vestitis, mox glabratis, biglandulosis; ramulis axillaribus 6-folioliferis, sparse pubescentibus, umbellis 2-3-flores vel flore unico terminatis; bracteolis lanceolatis, 1.5 mm longis; pedicellis gracillimis, ad apicem versus haud incrassatis, 12 mm longis, glabratis, floribus 12-14 mm diametro; sepalis ovatis, acutis, 3 mm longis, ferrugineo-tomentosis, glandulis calycinis 8 (sepalis unico nudo), oblongis, 2 mm longis; petalis roseis, valde inaequalibus; staminibus haud exsertis, filamentis 1.5 mm longis, albo-pubescentibus, antherarum loculis pilosis, connectivo nullo modo producto; stylis aequalibus, apice incrassatis; samaris usque 24 mm longis, ferrugineo-pubescentibus, nuce cristis parvis lateralibus ornata, ala falcato-elliptica, 10 mm lata.

Type in the U. S. National Herbarium, nos. 2046573 and 2046574, collected in chapada (brushy field), near Kilometer 210 along the highway from São Paulo to Cuiabá, Município of Cruz Verde, Minas Gerais, Brazil, June 28, 1951, by Amaro Macedo (no. 3226).

In Niedenzu's Monograph of the Malpighiaceae in the Pflanzenreich (IV. 141: 1-870. 1928), this species would fall next to *Banisteria stellaris* Griseb. However, it differs in its shrubby habit, and in its narrow acuminate cuneate biglandular leaves.

In using the generic name *Banisteriopsis* I am following the interpretation of C. V. Morton that *Banisteria*, being made a nomen rejiciendum by the conservation of *Heteropteris*, is thereby barred from any other use.

Family OCHNACEAE

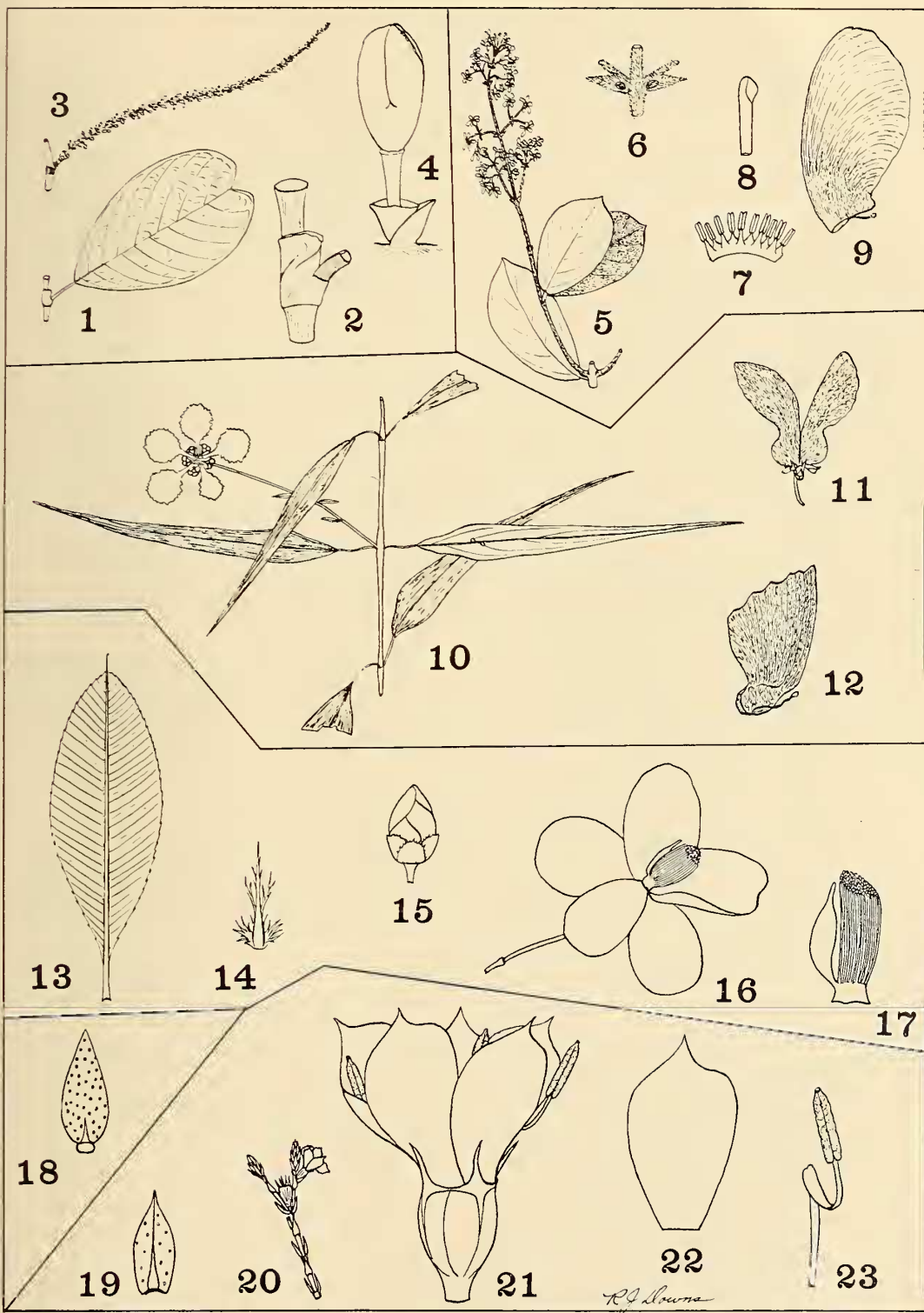
Luxemburgia macedoi Dwyer, sp. nov.

FIGS. 13-17

Arbusta; folia crebra apice ramulorum, stipulis saepe persistentibus lineari-subulatis, ad 0.4 cm longis, ciliis laxis ad subrectis paucis aut multis villosisque saepe arborescentibus ad 1.0 cm longis, petiolis glabris sublatis ad 0.7 cm longis, laminis glabris gracili-coriaceis oblongis, ad 9 cm longis, ad 3.5 cm latis, apice subobtusis (rare subtruncatis) solitario cilio ad 0.5 cm longo, basi attenuatis costa utrinque prominente venis prominulis (eis in medio ad 0.2 cm distantibus) marginibus vix serrulatis dentibus (praeter cilia pauca basi) subfalcatis aut uncinatisque, 0.3-0.5 mm longis; flores in racemis dispositi, rhachidibus glabris gracilibus superiora folia excedentibus, pedicellis gracilibus in medio circ. 0.5 mm latis, ascendentibus, ad 2.5 cm longis, locis articulationis a basi ad 0.5-4.5 cm extendentibus, bracteolis basalibus plerumque persistentibus lineari-oblongis, ad 0.5 cm longis, ad 0.12 cm latis, ciliis laxis distantibus (eis basi subfimbriatis), ad 0.9 mm longis; gemmae ovatae, ad 1.1 cm longae, sepalis anthesi laxis imbricatis inaequalibus subrotundis oblongis ad 4-5 mm latis, apicibus obtusis marginibus tenuibus irregularibus ciliis apice diffusis, petalis flavis, oblongis, ad 1.5 cm longis, ad 1.0 cm latis; staminibus \pm 60 antheris subsessilibus, 0.5-0.6 cm longis, ovariis coriaceis substipitatis, oblongis ad 0.7 cm longis, stylibus ad 2 mm longis, capsulis lignosis sublaevibus turgidis circ. 1.0 cm longis, pedicellis gracilibus, ad 2.5 cm longis.

Type in the U. S. National Herbarium, no. 2059866, collected in campo on the slopes of the Serra dos Pireneos, Município of Corumbá, Goiás, Brazil, December 18, 1951, by Amaro Macedo (no. 3536).

Luxemburgia macedoi, named in honor of its collector, is apparently the first species of the genus to be described from the State of Goiás. It is readily placed in the *Petiolatae* section of the genus and is obviously related to *L. polyandra* St. Hil. Its much larger flowers borne on pedicels with obvious articulation stalks, readily distinguish it from *L. polyandra*. Of all species of *Luxemburgia* known from flowering material



FIGS. 1-23.—1, *Coccoloba rubra*, leaf, $\times 1\frac{1}{2}$; 2, stipule, $\times 1$; 3, inflorescence, $\times 1\frac{1}{2}$; 4, flower, $\times 5$. 5, *Heteropteris ocellata*, branch, $\times 1\frac{1}{2}$; 6, bracts, $\times 1$; 7, stamens, $\times 2$; 8, style, $\times 5$; 9, samara, $\times 1$. 10, *Banisteriopsis macedoana*, section of branch, $\times 1$; 11, samaras, $\times 1$; 12, base of samara, $\times 2$. 13, *Luxemburgia macedoi*, leaf, $\times 1\frac{1}{2}$; 14, stipule, $\times 5$; 15, flower bud, $\times 1$; 16, flower, $\times 1$; 17, pistil and androecium, $\times 2$. 18, *Microlicia lutea*, leaf, $\times 2$. 19, *Microlicia macedoi*, leaf, $\times 2$; 20, apex of branch, $\times 1$; 21, flower, $\times 5$; 22, petal, $\times 5$; 23, stamen, $\times 5$.

L. macedoi possesses the largest number of stamens.

Family MELASTOMACEAE

Microlicia macedoi L. B. Smith & Wurdaek, sp. nov.

FIGS. 19-23

Fruticulosa, 28 cm alta et ultra, fastigiatim dichotome ramosissima, glaberrima, glutinosa; caule erecto, gracili, tereti, inferne non articulado; ramis erectis vel divaricatis, distincte articulatis, tetragonis; foliis sessilibus, strictis, subapproximatis, carnosulis rigidisque, ovato-oblongis, subacutis, haud pungentibus, basi cordatis, ad 4.5 mm longis integris vel levissime crenulatis, utrinque pallide viridibus, sparse pallideque glanduloso-punctatis, nervo mediano basi valde dilatato; floribus breviter pedicellatis; calyce viride, tubo subturbinato, 2 mm longo, superne non setoso, 5-costato, segmentis erectis, subulatis, 1 mm longis, basi valde remotis; petalis obovato-oblongis, acutis, 5 mm longis, fulgide aureis; staminibus distincte inaequalibus, antheris oblongis, aureis, margine undulatis, apice longe rostellatis, majoribus 2 mm longis, connectivo basi valde dilatato; capsula globosa, laeve, calyce persistente vestita.

Type in the U. S. National Herbarium, no. 2059764, collected in the mountains, Município of Niquelândia, Goiás, Brazil, July 24, 1952, by Amaro Macedo (no. 3636).

Its bright yellow petals distinguish *Microlicia macedoi* from all but a very few species in the genus, and of these it resembles *M. lutea* Markgraf (Fig. 18) much more closely than any other. Its main distinction is in its leaves which have a sparser paler punctation and a base enclosing the pulvinus.

Family GESNERIACEAE

Rechsteineria macrostachya (Lindl.) L. B. Smith, comb. nov.

Gesnera macrostachya Lindl. Bot. Reg. 14: pl. 1202. 1828.

Gesnera latifolia Mart. in Otto & Schlecht. Verh. Preuss. Gart.-Ver. 5: 219, pl. 1. 1829.

Rechsteineria latifolia O. Kuntze, Rev. Gen. 2: 474. 1891.

Corytholoma latifolium Fritsch, Bihang till K. Sv. Vet. Akad. Handl. 24: Afd. 3, no. 5: 22. 1898.

The necessity of the above combination became evident in the course of checking some bibliography for Dr. F. C. Hoehne's treatment of the Gesneriaceae for the "Flora Brasílica."

WASHINGTON SCIENTIFIC NEWS

INSULATING SEAL FOR HIGH-PRESSURE EQUIPMENT

In connection with work on high-pressure standards, the National Bureau of Standards has devised a special insulating seal which effectively solves the problem of leakage around electrical connections to high-pressure vessels. Simply constructed of inexpensive materials, the high-pressure seal utilizes a sapphire bushing to obtain the necessary combination of high mechanical strength and good electrical insulating properties. The device has successfully withstood pressure up to 170,000 pounds per square inch. It was designed by H. A. Bowman and associates of the Bureau staff working under the sponsorship of the Army Ordnance Corps.

HIGH-SCHOOL SCIENCE FAIR

Two high-school seniors from the Washington metropolitan area won a trip to

Cleveland as top prize in the Ninth Annual Science Fair of Washington, held late in April. The trip enabled the winners, Bette Coder, 17, of Northwestern High School, and Joel F. Lubar, 16, of Montgomery-Blair High School, to participate in the National Science Fair held in Cleveland in the middle of May. Miss Coder's entry exhibited the effect of pregnancy on mammillary cancer in mice, and Mr. Lubar's was an astrophotoscope, through which stellar photographs could be studied. The Washington Fair, with over 600 entries, was run by the Washington Junior Academy of Sciences and was sponsored by the District of Columbia Board of Education, Science Service, and the Washington Academy of Sciences. As we go to press, Circus Saints and Sinners, the Montgomery-Blair High School Student Council, the Washington Audio Society, and John P. Gilliland have contributed toward the cost of the trip.